



NSW Koala Strategy 2018–21 Final Report

Stabilising and increasing koala populations in New South Wales

Annual Report Foreword



The NSW Koala Strategy 2018–21 formalised the NSW Government’s long-term vision and commitment to stabilise and increase koala populations across the state.

On commencement in 2018, this \$44.7 million strategy was the biggest commitment by any state government to secure koalas in the wild.

This final annual report celebrates the successes of this strategy and acknowledges that more work needs to be done.

Significant outcomes for koalas were achieved through the strategy.

We purchased more than 6,270 hectares of koala habitat to add to the NSW national park estate. We set aside almost 9,000 hectares of state forest for koalas. We conserved more than 2,800 hectares of koala habitat on private land through conservation agreements. We partnered with Taronga Conservation Society Australia to deliver a world-class course for vets and vet nurses in wildlife care.

Importantly, we delivered eight projects with Aboriginal partners to support regeneration and protection of koala habitat through cultural management activities.

We developed and released the Koala Habitat Information Base, which helps us monitor koalas in NSW. This delivers the best available spatial data on koala habitat, likelihood, preferred trees and sightings for New South Wales.

In addition, we developed the NSW Koala Monitoring Framework to help us get a better understanding of long-term trends in koala populations.

During the rollout of this strategy, the unprecedented bushfires of 2019–20 burnt thousands of hectares of important habitat for koalas and other native species. We responded quickly and adapted the strategy to re-direct funding to help koalas recover from the fires.

Despite the successes of the strategy, serious concerns remain for the future of koalas in New South Wales. That’s why we’ve now made the biggest financial commitment by any government to secure the future of koalas in the wild.

The new NSW Koala Strategy will deliver \$193.3 million and more than 30 actions to help achieve our ambition of doubling koala numbers in the state by 2050.

I look forward to working with the many dedicated people involved in koala conservation to achieve this goal.

The Hon. James Griffin MP
Minister for Environment and Heritage

Statement of the Expert Advisory Panel



Dr Chris Armstrong PSM
Deputy Chief Scientist & Engineer,
Chair, Koala Strategy Independent
Expert Advisory Panel

Koalas are an iconic species and a totem for many Aboriginal communities across the state. The threats to koalas are well known and the decline of koala populations is a concern for all. This final annual report on the NSW Koala Strategy 2018–21 acknowledges what has been achieved over its 3 years and the work that still needs to be done.

The NSW Koala Strategy 2018–21 had the aim of addressing key threats to stabilise and then increase koala numbers in New South Wales. As set out in this report, this strategy has had many successes, such as the protection of habitat through land purchases and conservation agreements, working with local communities to undertake local koala conservation actions, improved and open data on koalas and their habitat available through the NSW environment SEED portal, and the provision of support and training for wildlife carers and rehabilitators.



Professor Kathy Belov AO
Professor Comparative Genomics,
Pro Vice-Chancellor Global Engagement,
School of Life and Environmental
Sciences, The University of Sydney

The strategy also funded the 10-year Koala Research Plan, and the NSW Koala Monitoring Framework was developed. The new knowledge that has, and will, be gained from this research and monitoring will be critical for conservation efforts into the future.

The impact of the 2019–20 bushfires exacerbated existing threats for all wildlife within New South Wales and it was estimated that at least 5,000 koalas were lost. This has put koalas in New South Wales on the precipice of risk of extinction in the future, so more work is needed to ensure their survival.

In July 2020, the then Minister for Energy and Environment set an ambitious goal of doubling the koala population in New South Wales by 2050. An expanded version of this Panel worked with the NSW Government to develop a new koala program that focuses on key koala populations and uses data to design locally specific actions.



Dr Carolyn Hogg
Senior Research Manager, School of Life and
Environmental Sciences, The University of
Sydney

This \$193-million program is delivering actions over 5 years aimed at securing and restoring habitat, mitigating other known threats (such as vehicle strike and disease) and building our knowledge of koala populations. It is also targeting conservation efforts where they will deliver the most effective outcomes.

New technologies and innovation will play an important role in this new program and there are currently 2 projects underway to provide baseline information on which to measure the success of program actions.



Professor Jonathan Rhodes
School of Earth and Environmental
Sciences, The University of Queensland

The first project is the development of a genetic map of koalas that sequences the whole genomes of koala populations across New South Wales, to investigate where different genetic variation currently exists. This will then guide conservation actions including translocations.

The second project is an initiative to find new technologies to improve how we survey koalas as they are difficult to find in the wild. This will support our understanding of where populations are located and help guide actions such as habitat conservation.

The Panel will continue working with the Government to implement this new program.

NSW Koala Strategy 2018-21 actions at a glance



Koala habitat conservation

- Permanently conserve priority koala habitat as national parks
- Protecting koala habitat through new koala reserves
- The Biodiversity Conservation Trust (BCT) to prioritise koala habitat for funding
- Management of Crown land, travelling stock reserves and other public land to conserve high-quality koala habitat
- Government agencies will assess koala habitat values to guide the future use of excess land



Conservation through community action

- Deliver local actions to protect koala populations
- Learn from Aboriginal communities on protecting koala habitat
- Develop an online community portal on koalas



Safety and health of koala populations

- Create a network of koala and wildlife hospitals and vet services across NSW
- Research project on chlamydia in koalas
- Fix priority koala road kill hotspots across NSW
- Relocation of koalas to unoccupied koala habitat
- Support koala rehabilitators
- Train vets in native wildlife care
- Develop a best practice planning guideline for koalas
- Australian Museum is designated as the biobank to store koala genetic information in NSW



Building our knowledge

- Create a statewide koala habitat information base to inform koala conservation decisions
- Statewide citizen science koala survey
- Pilot an app to collect information about koalas
- Koala Strategy monitoring program
- Information collected about koalas can be easily accessed by the community
- Supporting priority koala research
- Research on koala responses to native forest harvesting
- Improving our approach to fire management to protect koalas and their habitat



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Purpose of this report

The NSW Koala Strategy 2018–21 set the foundation for the Government’s longer-term vision to stabilise and increase koala populations across New South Wales.

The strategy supported a range of conservation actions delivered over 3 years under 4 pillars:

- Koala habitat conservation
- Conservation through community action
- Safety and health of koala populations
- Building our knowledge.

This is the final annual report on progress in implementing the NSW Koala Strategy 2018–21. It details the achievements of the strategy during 2020–21, while also summarising the strategy’s total achievements since it was released on 6 May 2018.

The substantial results from implementing this strategy were made possible by the passion and commitment from the community in partnering with the Government. Together, we have established a strong foundation to help achieve the goal of doubling the number of koalas in New South Wales by 2050.

For further information about the strategy see the [NSW Koala Strategy](#) webpage on the NSW Environment website.

NSW Koala Strategy inter-agency committee

The Environment and Heritage Group, part of the Department of Planning and Environment (formerly the Department of Planning, Industry and Environment), coordinated implementation of the [NSW Koala Strategy 2018–21](#) through an inter-agency committee of senior officers from NSW Government agencies. The committee met 4 times during the final year of strategy implementation. Summaries of the discussions from these meetings are available on the [NSW Koala Strategy inter-agency committee](#) webpage.

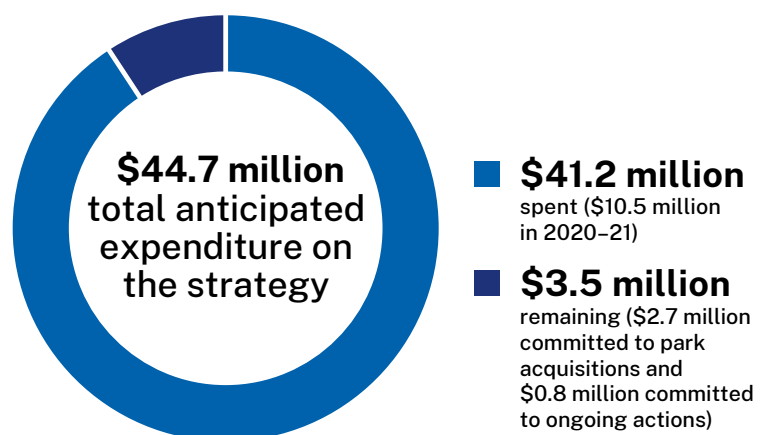


Figure 1 Total spend is \$41.2 million expended to March 2022.



Responding to the 2019–20 bushfires

Koalas in New South Wales, like many other species, face the threat of wildfire. The 2019–20 bushfires exacerbated existing threats and it is estimated that at least 5,000 koalas in our state were lost in the fires.

Fire and the impacts of climate change were considered in the actions of the NSW Koala Strategy 2018–21. The scale and intensity of the 2019–20 bushfires and the ongoing impacts of drought required additional actions to support the recovery of koala populations.

In January 2020, the NSW Government released the [Wildlife and Conservation Bushfire Recovery: Immediate Response](#) and then, in February 2021, the [NSW Wildlife and Conservation Bushfire Recovery: Medium-term Response Plan](#).

The plans set out the actions that were implemented to support post-fire biodiversity recovery in the immediate and medium term.

Immediate actions to help wildlife recover from the 2019–20 bushfires included the deployment of watering stations, supplementary food drops and broadscale feral animal control.

Medium-term actions to help koalas were informed by a workshop led by the NSW Koala Strategy Independent Expert Advisory Panel in early February 2020. Representatives from community groups, non-government organisations, research organisations and government participated in this workshop to identify actions to support bushfire recovery. These actions include measuring long-term trends in koala populations to provide a better understanding of the recovery of koala populations and trialling the relocation of koalas to unoccupied koala habitat to support recovery.



Conducting post-fire on-ground surveys

The Department of Planning and Environment, in collaboration with the local community, conducted a post-fire survey of koalas and their habitat across a 25,000-hectare study area in the NSW Far South Coast region. The survey was undertaken between March and October 2020, following the massive January 2020 bushfires that burnt much of south-east New South Wales. The survey methods and results are provided in the NSW Far South Coast post-fire koala survey.

Surveys were also undertaken in fire affected koala habitat in the Southern Highlands, Mid North Coast, Far North Coast and Northern Rivers regions.

The surveys:

- assessed the impacts of the fires on local koala populations
- identified injured koalas that needed care
- assisted researchers to compare outcomes between rehabilitated and resident koalas.

The Department also undertook broadscale surveys of fire impacts on koala populations in 24 national parks across north-east New South Wales. A total of 441 surveys were conducted across 15 study areas, using specialised koala detection dogs. Surveys were undertaken both in burnt habitat and in unburnt or mildly-burnt habitat to determine whether these areas provided refuges for koalas during the fires.

The study found that the fires had a significant impact on koalas in the national parks surveyed. However, it also showed that koalas had persisted after the fires in all study areas. Additionally, the study mapped areas of likely refugia to inform future management actions.



Pillar 1 – Koala habitat conservation

Protecting koala habitat helps the long-term conservation of koala populations across New South Wales and provides safe homes for rehabilitated koalas being returned to the wild.

We have protected koala habitat by expanding our national parks, transferring areas of state forest to the care and management of the NSW National Parks and Wildlife Service, and entering into conservation agreements with private landholders.

The Koala Habitat Information Base was successfully established. It is now being used to inform evidence-based land use decisions concerning koala habitat in New South Wales. This includes using spatial data from the information base to help NSW Government agencies identify koala habitat values in their assessments of excess land across New South Wales, with the aim of protecting more land with koala habitat values. This work is continuing in 2021–22.

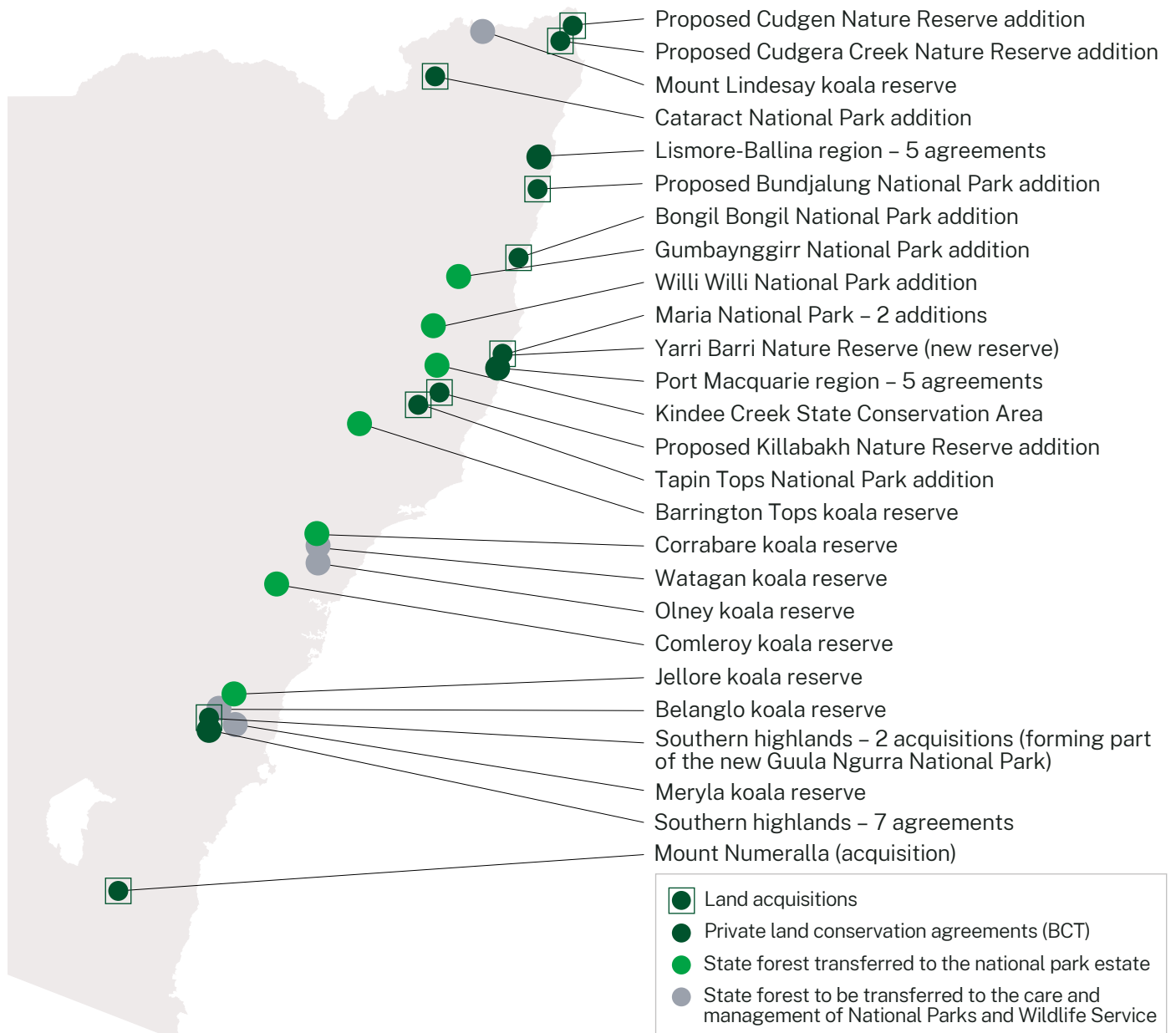


Figure 2 Koala habitat conservation.

Highlights under Pillar 1

- Over 6,270 hectares of land purchased to add to the national park estate (2,664 hectares purchased in 2020-21 and until March 2022)
- 8,975 hectares of state forest set aside for koalas and another 8,398 hectares in progress (4,924 hectares transferred in 2020-21)
- 2,834 hectares of private land protected by conservation agreements (2,579 hectares protected in 2020-21)



Koala in the Appin Sydney Water Catchment area
Ian Radosavljevic/DPE

Case study: Biodiversity Conservation Trust (BCT) Southern Highlands koala habitat conservation tender

The BCT's Southern Highlands koala habitat tender, which was delayed following the 2019-20 bushfires, resulted in 7 conservation agreements covering 2,579 hectares. The area covered by these agreements contains important koala habitat and includes locally significant, preferred feed trees. By securing koala habitat on private land, the agreements improve connectivity and facilitate movement between formal reserves.

The Southern Highlands koala population has been identified as a high priority for investment because it represents the largest known population of koalas in southern New South Wales, comprising around 10% of the total New South Wales population. The BCT has invested \$28.7 million to fund the annual conservation management payments to these landholders.

One of these agreements is near Mittagong where, in 1978, 5 families banded together to purchase a 100-hectare bush property. Now, more than 40 years later, 3 generations of landholders are protecting and enjoying its biodiversity. The company, formed by the 5 families when they purchased the land, meets regularly to discuss its management. In 2020, the company agreed to bid in the BCT's Southern Highlands Koala Habitat conservation tender and found out later that year that they were successful.

This means that habitat for koalas and threatened species such as the yellow-bellied glider, spotted-tailed quoll, scarlet robin and glossy black-cockatoo is protected in-perpetuity by a conservation agreement registered on the title of the land. This agreement comes with ongoing annual management payments, which will be used to fix fencing, control weeds, and address a wild pig problem, as well as other management activities.



Pillar 2 – Conservation through community action

Communities across New South Wales love their koalas and are working hard to protect them, using their local information, knowledge and networks.

The NSW Koala Strategy 2018–21 built on this passion, bringing community groups together to share information and work collaboratively. Actions delivered by the community have made a difference to koala conservation at the local level.

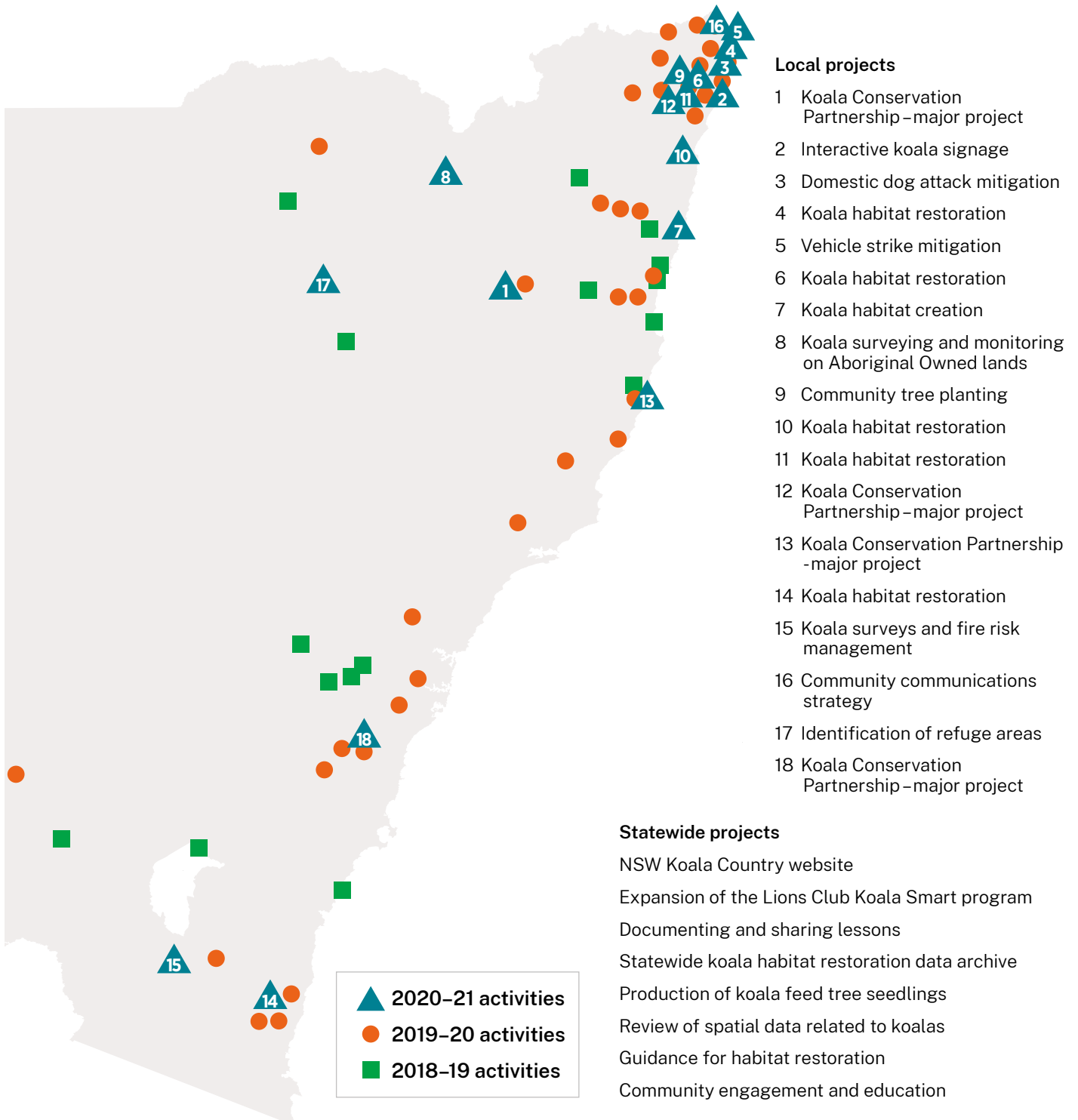


Figure 3 Community action supporting koala conservation

Highlights under Pillar 2

- 73 local action projects undertaken to secure koalas in communities throughout New South Wales
- 8 projects with Aboriginal partners to support traditional healing of koala Country
- Established the [NSW Koala Country website](#) to shine a spotlight on community koala conservation in New South Wales
- Launched a dedicated NSW Koala Country page to celebrate Aboriginal connections to koalas
- 40 teachers registered with the Koala Smart program since its launch in June 2020

Case study: Bow wow! Leash me now!

Funded by the NSW Koala Strategy 2018–21, Byron Shire Council launched the community behaviour change project *Bow wow! Leash me now!* This project aimed to reduce interactions between dogs and koalas. It tested the effectiveness of social behaviour change using social, digital and signage media communications and ran a successful region-wide TV commercial about koalas and dogs.

The project resulted in some very clear behaviour change with dog owners increasingly leashing their dogs on the street and in parks, and owners of larger dogs ensuring their dogs were leashed.

If the messaging is right, communication campaigns can achieve changes to dog owner behaviour.



Figure 4 Promotional material from the Bow wow! Leash me now! campaign

Table 1 Local actions delivered to address threats to koala populations in 2020–21

Location	Project name	Project description
Armidale	Northern Tablelands Koala Conservation Partnership–major project	A koala conservation partnership was established in the Northern Tablelands, recognising an important koala population around Armidale.
Ballina	Interactive koala signage at Ballina Airport	Interactive koala signage was installed at Ballina Airport. The signage provides information about the local koala population and ways people can help to support this population.
Byron Bay	<i>Bow wow! Leash me now!</i> campaign	A behavioural change program was delivered by Byron Shire Council to reduce the impacts of domestic dogs on koalas and other threatened fauna. The project involved a region-wide TV commercial campaign.
Byron Bay	Mullumbimby High School koala planting project	<i>Trees for Koalas</i> is an initiative by Mullumbimby High School students that aims to promote and restore koala habitats throughout the area.
Byron Bay	Vehicle strike mitigation	A koala road zone was installed at Goonengerry to alert and remind drivers to look out for koalas and to slow down. The road zone includes 2 sets of distinctive road markings, as well as signs at a site with koala habitat and breeding females.
Clunes	Weed control and tree planting in Clunes and Broken Head	Restoration work was undertaken to control weeds, plant trees and ensure maintenance of important koala habitat in Clunes and Broken Head.
Coffs Harbour	Habitat creation in Bongil Bongil National Park	Funds have been provided to regenerate, weed and plant cleared blocks of ex-banana plantations with tallowwood, grey gum and forest oak.
Inverell/Ashford	Koala surveying and monitoring on Aboriginal Owned lands	Koala surveys, habitat assessment and community engagement were undertaken on Aboriginal Owned Lands.
Kyogle	Community tree planting in Kyogle	Community planting activities have extended koala habitat and created a corridor between Richmond Valley and the Border Ranges National Park.
Lawrence	Koala Habitat Restoration in the lower Clarence Valley	Restoration work was undertaken to control weeds, plant trees and ensure maintenance of important koala habitat in the Lawrence area.
Lismore	Koala habitat restoration in Lismore	Friends of the Koala restored koala habitat on floodplains near Lismore.
Lismore, Northern Rivers	Northern Rivers Koala Conservation Partnership–major project	A 3-year partnership between Tweed, Byron, Ballina and Lismore councils, Friends of the Koala and the Department of Planning and Environment is delivering private land conservation, veterinary care, habitat restoration, landholder and community engagement, and koala monitoring.
Port Macquarie	Hastings–Macleay Koala Conservation Partnership–major project	A 3-year partnership between Port Macquarie-Hastings and Kempsey Shire councils, Mid North Coast Joint Organisation, Port Macquarie Koala Hospital and DPE is delivering habitat restoration, private land conservation, landholder and community engagement, and koala monitoring.
Southern Coastal Forests	Koala conservation in the Southern Coastal Forests	Koala habitat restoration is being trialled, fire risk modelling is being undertaken and koala surveys are being delivered in the Southern Coastal Forests.

Location	Project name	Project description
Southern Tablelands	Koala conservation in the Southern Tablelands	Koala surveys and fire risk modelling are being undertaken and a bushfire risk management plan is being developed for the region to reduce wildfire risk for koalas.
Tweed Heads	Community Communications Strategy	Regional communications strategy for the Northern Rivers region driven by Tweed Shire Council.
Western slopes and plains (Gunnedah and Moree)	Identification of refuge areas in inland New South Wales	A new methodology is being developed in partnership with Macquarie University to map refuge habitat for inland koalas.
Wingecarribee	Southern Highlands Koala Conservation Partnership –major project	A 3-year partnership between Wingecarribee Shire Council and DPE is delivering habitat restoration, private land conservation, landholder and community engagement, and koala monitoring.
Statewide	NSW Koala Country website	The NSW Koala Country website is being managed and maintained, including new content celebrating Aboriginal connections with koalas.
Statewide	Expansion of the Lions Club Koala Smart program	A curriculum framework and support materials have been developed to encourage teachers to implement the Koala Smart program in their school.
Statewide	Koala communication and engagement	Lessons from a range of koala projects are being documented and will be shared with the community.
Statewide	Statewide koala habitat restoration data archive	A statewide koala habitat restoration data archive was developed and key historical data was collected.
Statewide	Production of koala feed tree seedlings	85,000 koala feed tree seedlings have been distributed to community groups to support habitat restoration projects.
Statewide	Review of spatial data related to koalas	The spatial framework for koala conservation is being reviewed. Areas of Regional Koala Significance (ARKS) are used to inform conservation investment across New South Wales.
Statewide	Guidance for habitat restoration	Habitat restoration guidance has been developed to support local management.
Statewide	Koala community engagement and education	Developed a range of materials and activities that promote koala conservation to a wide audience. This includes materials for the NSW Koala Country website and support for the Koala Smart schools project in the Hastings region.



Koala habitat restoration, Clarence Valley community project. © Thunderbox Films



Pillar 3 – Safety and health of koala populations

The NSW Koala Strategy 2018–21 focused on minimising threats to koalas as well as improving our ability to support koalas that need care and rehabilitation.

The strategy delivered a range of actions to help minimise harmful human interactions with koalas, including funding measures to prevent koala injuries and deaths from vehicle strike in 4 hotspot areas. The strategy has also delivered expert research to review the effectiveness and challenges of relocating koalas as a conservation tool and provide recommendations for translocation. It has also initiated preliminary research into the feasibility of potential trial translocation sites.

The NSW Government has provided better care facilities, expanded resources and published targeted information so that sick and injured koalas have the best chance to survive and return to the wild. This included working with partners to create and upgrade a network of koala hospitals and care services.

The NSW Government also partnered with Taronga Conservation Society Australia to develop and deliver professional development training for vets and vet nurses in wildlife care.

This has laid the groundwork for future efforts to keep koalas out of harm's way and deliver specialised care where needed.

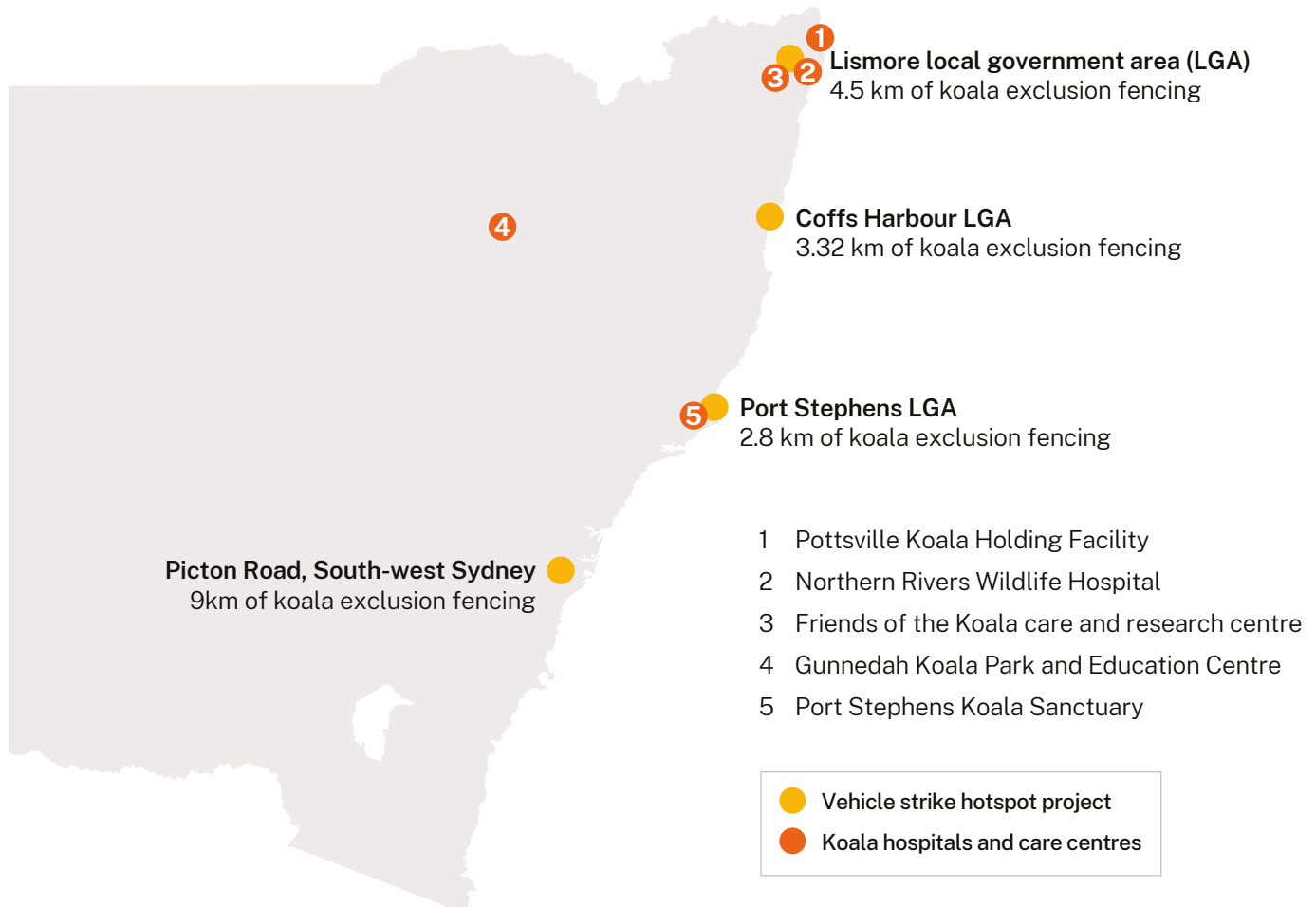


Figure 5 Locations of vehicle strike hotspot projects, and koala hospitals and care centres supported by the NSW Government

Highlights under Pillar 3

- About \$420,000 allocated in grants for licensed koala rehabilitation providers to purchase new equipment and materials
- An extensive range of resources developed to support wildlife rehabilitators including a koala rehabilitation code of practice, initial treatment and care guidelines, training standards and a trainers guide
- Koala genetic sampling protocols were developed and training in sample collection provided to the wildlife rehabilitation sector. Nearly 1,150 samples from the sector have been sent for storage at the Australian Museum biobank. A total of 2,168 genetic samples have been received since the biobank began
- Improved reporting protocols and data validation has enabled 13,330 historical koala rescue records to be imported to NSW BioNet to inform future research, planning and species management programs
- The NSW Government supported the construction, expansion or upgrade of 5 koala hospitals and care facilities – Port Stephens Koala Sanctuary, Pottsville Koala Holding Facility, Northern Rivers Wildlife Hospital, Friends of the Koala care and research centre in Lismore, and the Gunnedah Koala Park and Education Centre
- More than 19 kilometres of fencing is being installed in 4 hotspot areas to prevent koala vehicle strikes
- Over 280 vets and vet nurses completed the veterinary professional development course in wildlife treatment and care

Highlights in 2020–21

- Guidelines published to improve the care of koalas used in scientific research, published in September 2020
- NSW Volunteer Wildlife Rehabilitation Sector Strategy published in December 2020
- Launch of the NSW Wildlife Rehabilitation dashboard, with approximately 8,000 koala records over 7 years
- Almost 100 people attended koala rehabilitation webinars on koala anatomy, biology and physiology
- 34 koalas being monitored through a post-release monitoring study
- 2 koala translocation workshops were run to seek expert input on developing a conservation framework for koala translocation in New South Wales

Case study: Using data to determine the success of releasing rehabilitated koalas



Koala fitted with radio tracking collar. Dan Lunney/DPE



Koala rehabilitation, Friends of the Koala. Shona Lorigan/DPE

Under the NSW Koala Strategy 2018–21, research was conducted to assess survival rates after koalas had been released from rehabilitation. This project was delivered through cooperation between wildlife rehabilitators and government researchers.

Aside from the demands of rescuing and rehabilitating wildlife, volunteer wildlife rehabilitators play an important role in collecting data. A range of information is collected from the point of a rescue to when an animal is released. The coordination of information collection and the organisation of these data is an enormous task.

Based in Lismore, the koala conservation group Friends of the Koala rescues more than 350 sick, injured and orphaned koalas each year. Friends of the Koala has more than 30 years of data on koalas that they use to produce customised reports. For example, Friends of the Koala has identified certain stretches of road where koalas are at higher risk of motor vehicle injury and that an increasing number of female koalas are being rescued and diagnosed with chlamydial infection.

Researchers from National Parks and Wildlife Service and the Science, Economics and Insights division of the Department of Planning and Environment were given access to data gathered by Friends of the Koala. These records were combed to assess trends in reasons for koalas coming into rehabilitation, and how long rehabilitated koalas survive once they have re-joined the wild population, based on the post-release survival of ear-tagged koalas.

The researchers addressed the question: will a koala released from rehabilitation re-join the wild population and survive for months, if not years? Using ear-tag records as unique identifiers of individual koalas, the 31-year set of records identified 5,051 koala admission records (1989–2020) of koalas that had returned to rehabilitation for a second, third or fourth time. Readmission figures mostly fitted the pattern of first admissions, meaning the released koalas had become part of the local koala population.

Rehabilitated koalas can survive long-term and become part of the broader population of koalas in the wild, with 1 remarkable example of a koala released when it was 5 years old that continued to survive for 13 years before it was readmitted to care. The researchers concluded that rehabilitated and released koalas can survive in the wild long-term, even though some koalas were readmitted after a very brief period post-release. The success of rehabilitation and release, as judged by readmitted tagged koalas, is a more robust view of success for koala survival after rehabilitation than simply the proportion of released versus non-released koalas. The research confirms that community participation in koala rescue and rehabilitation is an important aspect of koala conservation and an essential contributor to tackling the threats impacting koalas in New South Wales.



Pillar 4 – Building our knowledge

There is still a lot to learn about koalas in New South Wales. Improving our knowledge is key to identifying how to protect them. In parallel with taking action, a number of research and citizen science initiatives are setting the foundation for future conservation decisions.

In its third year, the NSW Koala Strategy 2018–21 delivered a range of actions to increase our knowledge about koalas and their habitat. This includes delivering a second Koala Research Symposium in June 2021 where researchers presented the preliminary results of the 10 research projects funded through the 10-year Koala Research Plan and discussed future knowledge needs. This symposium was originally planned for 2020 but was postponed due to COVID-19 restrictions.

We also published and began to implement the NSW Koala Monitoring Framework to provide an overall structure for long-term koala monitoring in New South Wales. The framework provides a consistent, best practice approach that will provide reliable information on population trends and indicators of population health.

These actions build on the work we have undertaken over the last 3 years to improve our knowledge of koalas and their habitat and how to manage threats including climate change and diseases. We will continue to ensure that conservation actions and policy decisions to protect koalas are based on the best available information.



Figure 6 Local and regional sites being monitored by our partners under the NSW Koala Monitoring Framework during the NSW Koala Strategy 2018–21.



Highlights under Pillar 4

- Data and information we collected about koalas was made publicly available in NSW BioNet and through the NSW Government's Sharing and Enabling Environmental Data (SEED) portal, including the data from:
 - community surveys
 - koala monitoring programs
 - koala rehabilitators
 - *I Spy Koala* app
- Koala Habitat Information Base released on the SEED portal, which provides the best available statewide data on koala habitat, koala preferred trees, koala likelihood and koala occurrence for New South Wales
- 10 research projects funded through the 10-year Koala Research Plan
- 951 koala observations recorded on the *I Spy Koala* app
- 28,827 koala records added to NSW BioNet
- 4,630 pageviews of the Koala Habitat Information Base datasets on the SEED portal

Highlights in 2020–21

- 10 monitoring sites surveyed
- 3 koala research projects to fill key knowledge gaps completed
- 7,048 people completed the Community Wildlife Survey
- 2,199 koala sightings from the Community Wildlife Survey
- 164 registered attendees at the 2021 Koala Research Symposium

Case study: Koala Monitoring Framework



Scientists from Science, Economics and Insights developed the NSW Koala Monitoring Framework to better understand changes in koala populations and assess the effectiveness of conservation actions. The framework was published in July 2021.

Monitoring plays an important role in koala conservation management. It is essential to understand the drivers of decline, evaluate management effectiveness and provide evidence to support policy. In addition, reliable, long-term data is required to establish baselines, detect and evaluate trends in populations and increase predictive capacity.

The framework enables a consistent, best practice approach that will provide reliable information on population trends and indicators of population health.

We have engaged with government and non-government partners to establish monitoring sites and gather data for the NSW Koala Monitoring Framework. In 2020–21, we worked with our partners and the community to monitor koala populations in 10 locations (see Table 2).

The framework is publicly available on the [NSW Koala Monitoring Framework](#) webpage.

Table 2 2020–21 monitoring of koala populations

Monitoring location	Type of monitoring	Partners
Bongil Bongil National Park	Population dynamics	National Parks & Wildlife Service, community volunteers
Byron	Population dynamics	Byron Shire Council
Lismore	Population dynamics	Lismore City Council
Mid North Coast	Population dynamics	Mid North Coast Joint Organisation, Port Macquarie Koala Hospital
North East Forests	Population dynamics	Department of Primary Industries Forest Science, Natural Resources Commission
Pilliga State Conservation Area and Gilgai section of the Pilliga National Park	Population dynamics	Australian Wildlife Conservancy, National Parks and Wildlife Service
Pilliga State Forests	Population dynamics	Forestry Corporation of NSW, Department of Primary Industries Forest Science
South Coast	Population dynamics	Department of Planning and Environment South East
Southern Highlands	Population dynamics	Wingecarribee Shire Council
South-west Sydney	Disease	Department of Planning and Environment Greater Sydney Cumberland Plain Conservation Plan



Looking beyond the NSW Koala Strategy 2018-21

In 2020, the then Minister for Energy and Environment set a new target to double koala numbers in New South Wales by 2050. This target is being supported by a \$193.3 million investment to fund the first 5 years of action needed to work towards this long-term goal.

Through an updated NSW Koala Strategy, the Government will continue to build on the work achieved through the NSW Koala Strategy 2018–21. We will continue to secure and restore habitat to support the growth of koala populations and build our knowledge of koalas. We will also mitigate other known threats to koala populations, targeting conservation efforts where they will deliver the most effective outcomes.

Looking to the future, we will continue to consider the advice of the NSW Koala Strategy Independent Expert Advisory Panel, findings from research and monitoring, and ongoing input from implementation partners and the community, to achieve an adaptive management approach to koala conservation. This will help ensure we maximise outcomes for koalas.

How can I find out more?

Further information about the NSW Koala Strategy can be found on the NSW Government's [Environment and Heritage Group website](#).

To learn more about koalas in NSW, share information, and find ways to get involved in koala conservation, please visit the [NSW Koala Country community website](#).

If you want to learn more about how the NSW Government is working to secure other threatened species in the wild, please visit the [threatened species webpage](#).



Summary of NSW Koala Strategy 2018–21 actions



Pillar 1: Koala habitat conservation

Pillar	Action	Status
Koala habitat conservation	<p>Permanently conserve priority koala habitat as national parks</p> <p>13 properties, totalling over 6,270 hectares have been purchased as part of the strategy’s action to acquire and reserve land with high koala conservation value in the national parks system.</p> <p>More purchases are underway and will be published on the Land purchased for parks webpage.</p>	Ongoing
	<p>Protecting koala habitat through new koala reserves</p> <p>8,975 hectares of state forest has been transferred to the management of the National Parks and Wildlife Service including over 4,900 hectares transferred in 2020-21. A further transfer is underway.</p> <p>Information about new areas for conservation is published on the New areas for conservation in NSW webpage.</p>	Ongoing
	<p>The BCT to prioritise koala habitat for funding</p> <p>17 conservation agreements completed with private landholders, covering 2,834 hectares of priority koala habitat.</p> <p>More information on these agreements is available on the BCT’s Private land conservation outcomes webpage.</p>	Complete
	<p>Management of Crown land, travelling stock reserves and other public land to conserve high-quality koala habitat</p> <p>A working group of local council and NSW Government agencies piloted a project to improve the management of koala habitat across public lands in the Wingecarribee region. The project:</p> <ul style="list-style-type: none"> • Identified and protected koalas and their habitat as an environmental asset in local fire management plans • Identified better ways to manage effective planned hazard reduction burns in koala habitat • Refined the protocols for how and under what conditions National Parks and Wildlife Service implements hazard reduction burns in koala habitat. <p>The NSW Government is continuing to explore ways to improve the management of public lands to identify and protect koala habitat and other environmental values.</p>	Complete
	<p>Government agencies will assess koala habitat values to guide the future use of excess land</p> <p>Spatial layers from the strategy’s Koala Habitat Information Base have been incorporated into the process used by Crown Lands to assess land before it’s sold or transferred.</p>	Complete



Pillar 2: Supporting local communities to conserve koalas

Pillar	Action	Status
Conservation through community action	<p>Deliver local actions to protect koala populations</p> <p>73 local actions were delivered in partnership with councils, community groups and universities to address local threats to koalas. These local actions include supporting local communities to undertake habitat restoration, mitigating dog attack and vehicle strike to koalas, community engagement and education, survey and monitoring, and filling local knowledge gaps.</p> <p>Details of each local action funded in the 2020–21 financial year can be found in Table 1 of this report.</p>	<p>Complete</p>
	<p>Learn from Aboriginal communities on protecting koala habitat</p> <p>We delivered 8 projects with Aboriginal partners to develop knowledge and skills on protecting koala habitat.</p> <p>The Aboriginal koala partnerships were developed in collaboration with communities, ensuring they met the needs of the community and delivered positive outcomes for koalas. The partnerships aimed to build the capacity of communities to manage their own land, share their cultural knowledge, and strengthen their connection to Country. Projects included habitat restoration, application of cultural fire, and survey and monitoring of koalas and their habitat.</p> <p>One of the partnerships was with the Gumbaynggirr people of the Coffs Harbour region and included supporting a series of Aboriginal ranger workshops to co-design traditional knowledge calendars, traditional land management films, and a culture-inspired koala management plan.</p> <p>Further information about the Gumbaynggirr Good Koala Country Plan is available on the NSW Koala Country website.</p>	<p>Complete</p>
	<p>Develop an online community portal on koalas</p> <p>The NSW Koala Country website was launched in 2019 to connect community and organisations working on koala conservation. It is the official website about koalas and their conservation in New South Wales.</p> <p>Since the launch it has received over 32,000 visitors and has had new webpages added to highlight habitat restoration work, Aboriginal partnerships, and profiles of many dedicated community members helping koalas.</p> <p>A dedicated Culture webpage celebrates Aboriginal connections to koalas.</p>	<p>Complete</p>



Pillar 3: Improving the safety and health of koalas

Pillar	Action	Status
Safety and health of koala populations	<p>Create a network of koala and wildlife hospitals and vet services across New South Wales</p> <p>We worked with delivery partners to build, expand and upgrade wildlife care facilities and to improve rehabilitation services, including \$3 million for a koala hospital and sanctuary in Port Stephens, which opened in September 2020.</p> <p>The NSW Government also supported the expansion and upgrade of the Pottsville Koala Holding Facility, Northern Rivers Wildlife Hospital, Friends of the Koala care and research centre in Lismore, and the Gunnedah Koala Park and Education Centre.</p>	Complete
	<p>Research project on chlamydia in koalas</p> <p>Chlamydia was identified as a priority for research under the Koala Research Plan. Four research projects were funded under the strategy:</p> <ul style="list-style-type: none"> • Testing a combination vaccine to protect koalas against the dual threats of chlamydia and koala retrovirus, University of the Sunshine Coast (research completed, May 2021) • Impacts and drivers of chlamydial disease in the koala: relationships between the host, pathogen and environment, University of Sydney (research due for completion in June 2022) • New and improved chlamydial treatment to reduce disease burden, University of Technology Sydney (research due for completion in November 2022) • Vaccination against chlamydiosis: an effective disease management tool in wild populations, University of Sydney (research due for completion in December 2022). 	Ongoing
	<p>Fix priority koala road kill hotspots across New South Wales</p> <p>The Department of Planning and Environment and Transport for NSW worked alongside local government, community groups and local land managers to address some of the state’s worst vehicle strike hotspots.</p> <p>Funding targeted 4 priority hotspots to install exclusion fencing and other treatments to exclude koalas from the roadway and encourage drivers to slow down.</p> <p>\$3.5 million was provided over 3 years to fix 4 priority vehicle strike hotspots at Picton Road, near Wollondilly, Lismore local government area (LGA), Port Stephens LGA and Coffs Harbour LGA.</p>	Complete
	<p>Relocation of koalas to unoccupied koala habitat</p> <p>In August 2020, a workshop was held to elicit expert advice on translocation of koalas as a conservation tool and the key components for successful translocation.</p> <p>In October 2020, a second targeted workshop was held to further explore options for a koala translocation trial and to build on findings of the August 2020 expert workshop.</p> <p>A draft report, ‘Koala translocation review and recommendations’, was submitted by research partners to the Environment and Heritage Group.</p> <p>A prioritisation and ranking process of the translocation trial options was undertaken by the Environment and Heritage Group.</p> <p>A preliminary study was funded to assess the feasibility of potential translocation sites, including factors such as habitat suitability, presence of koalas and threats such as disease.</p>	Complete

Pillar	Action	Status
Safety and health of koala populations	<p>Support koala rehabilitators</p> <p>Koala rehabilitators play a crucial role in improving the safety and health of koala populations in New South Wales. Some key highlights of this action include:</p> <ul style="list-style-type: none"> • Approximately \$420,000 allocated in grants for licensed koala rehabilitation providers to purchase new equipment and materials, including \$120,000 provided in the third year of the strategy to koala rehabilitators for equipment and transport needs • more than 70,000 wildlife rescue data points transferred to NSW BioNet per annum • the NSW Wildlife Rehabilitation dashboard was published, which can be used to explore trends for selected species, including the koala. <p>The following materials were also published:</p> <ul style="list-style-type: none"> • Best practice guidelines for the use of koalas in scientific research • Guidelines for initial treatment and care of rescued koalas • Code of practice for injured, sick and orphaned koalas • Koala Rehabilitation Training Standards and a trainers guide • NSW Wildlife Rehabilitation Sector Strategy 	Complete
	<p>Train vets in native wildlife care</p> <p>We partnered with Taronga Conservation Society Australia to deliver a professional development course to improve the capacity of veterinarians and veterinary nurses to treat Australian wildlife. The course was launched in 2020 and has been completed by 289 vets and vet nurses. Taronga is continuing to run the course.</p>	Complete
	<p>Develop a best practice planning guideline for koalas</p> <p>The best practice koala planning guidelines are voluntary and provide high-level principles and best practice advice to assess and mitigate the impact of development and planning decisions on koalas and koala habitat. The guidelines intend to inform the decision-making of multiple stakeholders at various stages in the planning system, with a focus on the strategic planning and development design stages.</p> <p>The guidelines align with existing NSW Government regulation and policies. The guidelines will be published in the 2021–22 financial year.</p>	Ongoing
	<p>Australian Museum is designated as the biobank to store koala genetic information in NSW</p> <p>National Parks and Wildlife Service and the Environment and Heritage Group continue to collaborate with the Australian Museum to acquire ongoing genetic samples.</p> <p>Licences issued under the <i>Biodiversity Conservation Act 2016</i> to collect tissue samples from koalas require DNA samples to be provided to the Australian Museum.</p> <p>2,168 genetic samples have been received, including 1,149 from the NSW wildlife rehabilitation sector.</p> <p>51 institutions have contributed.</p>	Complete



Pillar 4: Building our knowledge of koalas

Pillar	Action	Status
Building our knowledge	Create a statewide koala habitat information base to inform koala conservation decisions We developed the first statewide Koala Habitat Information Base . It delivers the best available statewide spatial data on koala habitat, likelihood, koala preferred trees and koala sightings for New South Wales. The spatial layers include: <ul style="list-style-type: none">• the Koala Habitat Suitability Model• the Koala Tree Suitability Index• Koala Likelihood Map and Koala Likelihood Confidence Map• Areas of Regional Koala Significance (ARKS)• native vegetation of New South Wales• koala sightings recorded in NSW BioNet. The database is an important resource that supports government agencies, local councils, private landholders and the community to make informed decisions about koala conservation.	Complete
	Statewide citizen science koala survey The community wildlife survey will help scientists gain a clearer picture of koalas and the threats they face. It will also help to decide priority sites for actions as part of the Koala Strategy. As of 15 June 2021, a total of 7,048 survey responses and 29,544 sightings of 10 species of mammal were received, including 2199 koalas. The data will be publicly available via NSW BioNet and published.	Complete
	Pilot an app to collect information about koalas <i>I Spy Koala</i> is a citizen science app that allows anyone in New South Wales to record sightings of koalas in the wild. It was developed for the community in a collaborative effort between government agencies to provide an accessible and reliable platform for environmental data. App users can enter information about the location and condition of the koala, as well as photos and other important information. Data from the app can be accessed through the Koala Sightings – BioNet section of the interactive NSW Government Sharing and Enabling Environmental Data (SEED) portal. The app is available on Apple and Google app stores.	Complete
	Koala strategy monitoring program A statewide cross-tenure koala monitoring program has been implemented by land managers at 13 sites across New South Wales. Refer to the NSW Koala Monitoring Framework for more information.	Complete

Pillar	Action	Status
Building our knowledge	<p>Information collected about koalas can be easily accessed by the community</p> <p>Data from the following sources is now publicly available through NSW BioNet and the SEED portal:</p> <ul style="list-style-type: none"> • the Koala Habitat Information Base • citizen scientists who contribute their data to NSW BioNet • fauna rehabilitators and koala hospitals • the <i>I Spy Koala</i> app • entries in the NSW BioNet database • the NSW Koala Monitoring Framework. 	Complete
	<p>Supporting priority koala research</p> <p>A 10-year research plan was released and \$1.93 million was committed for 10 research projects, which began in 2019. Consultation with koala experts was undertaken at 2 research symposia and translocation workshops.</p> <p>In June 2021, the second Koala Research Symposium presented the preliminary results from the 10 funded research projects, and discussed future research priorities and directions.</p> <p>For more information about priority koala research please visit the NSW Koala Research Plan webpage.</p>	Ongoing
	<p>Research on koala responses to native forest harvesting</p> <p>This action is overseen by the Natural Resources Commission and aims to better understand koala responses to timber harvesting in state forests on the North Coast of NSW. The research projects funded under this action were:</p> <ul style="list-style-type: none"> • Koala research in the hinterland forests of north-east New South Wales: GPS tracking and changes in koala density, Department of Primary Industries Forest Science Unit • Determining the effects of selective harvesting on habitat nutritional quality for koalas, Australian National University • Assessing the contribution of regenerating forests to koala nutrition using molecular and chemical faecal analysis to understand koala diet composition and quality, University of Western Sydney. <p>In September 2021, the Natural Resources Commission released its final research report, which can be accessed on the Natural Resources Commission koala research webpage.</p> <p>The NSW Government will continue to work with the Natural Resources Commission to further understand how koalas are responding to forestry operations on the North Coast of NSW.</p>	Complete
	<p>Improving our approach to fire management to protect koalas and koala habitat</p> <p>Environment and Heritage Group, National Parks and Wildlife Service and the Rural Fire Service continue to work together to:</p> <ul style="list-style-type: none"> • develop bushfire management guidelines for landholders, local councils and government agencies • publish a detailed set of actions to consider koalas in fire management. <p>The work will be completed in the 2021–22 financial year.</p>	Ongoing



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